

Quiz set for Wednesday December 20th

Solving Equations

distributive

P178
Q 11

$$(x-3)^2 = (x-3)(x-3)$$

$$x^2 - 3x - 3x + 9$$

$$\boxed{x^2 - 6x + 9}$$

P177

BEDMAS

$$e) (2x^2 + x - 5) - (7x^2 - (6x + 1))$$

$$- (4x^2 - x - 2)$$

$$2x^2 + x - 5 - 7x^2 + 6x - 1$$

$$-4x^2 + x + 2 =$$

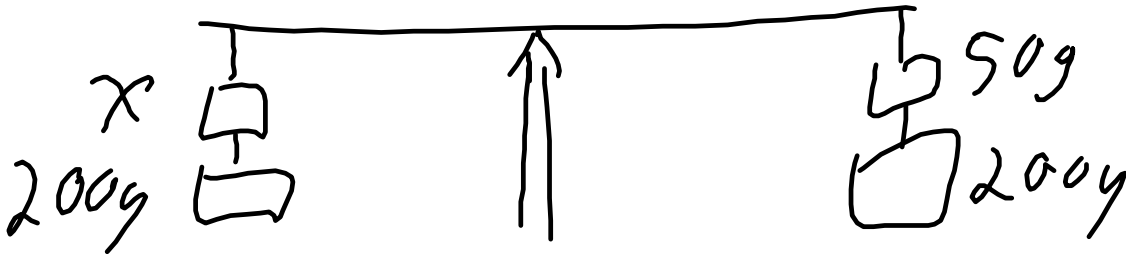
$$+ - 9 - 2 + 8x - 4$$

$$-9x^2 + 8x - 4$$

Solving Equations

Look at a simple example

balance:



$$x + 200g = 50g + 200g$$

$$x + 200g = 250g$$

$$- 200g$$

$$- 200g$$

* Same on both sides of the equation

we want to isolate variable

$$x = 50g$$

Solution

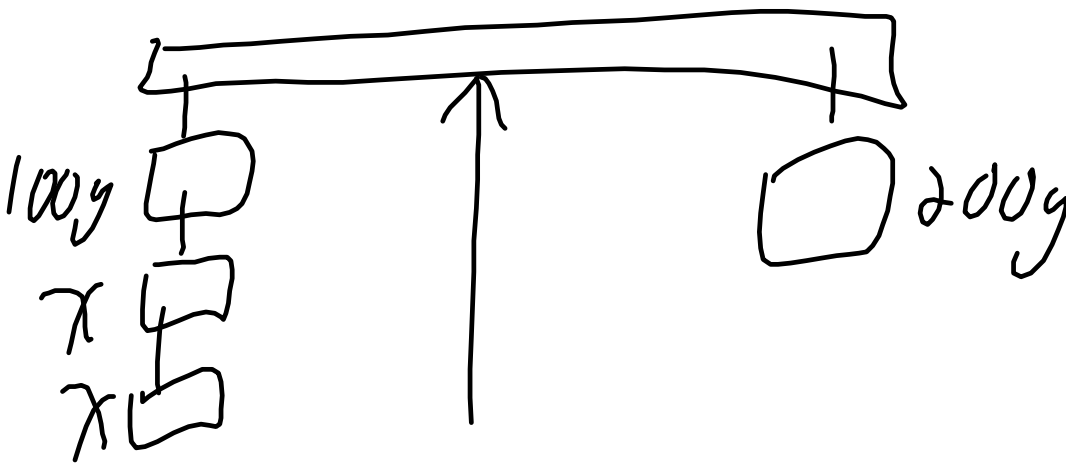
Check our work

$$x + 200 = 250$$

Sub $50 + 200 = 250$

✓ wood
↑
Happy
Happy

What if we have two of the same unknowns



$$2x + 100g = 200g$$

$$\begin{array}{r} -100g \quad -100g \\ \hline \end{array}$$

$$\frac{2x}{2} = \frac{100g}{2}$$

divide
by
the
coefficient

both sides
all terms

Coefficient

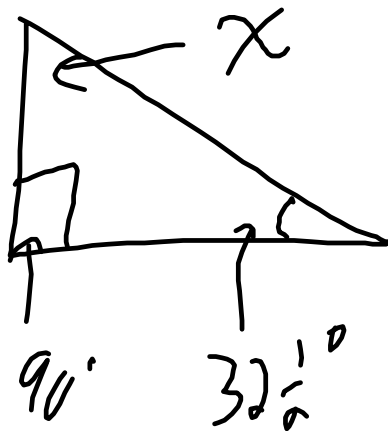
$$\boxed{x = 50}$$

11 11

p182, skip 183, 184, 185

Left hand side

p185
Q12



\angle 's add to 180

$$x + 90 + 32\frac{1}{2} = 180$$

$$\begin{array}{r} -90 \end{array}$$

$$x + 32\frac{1}{2} = 90$$

$$\begin{array}{r} -32\frac{1}{2} \end{array}$$

$$\boxed{x = 57\frac{1}{2}}$$

p184

$$\begin{array}{r} Q7 i) \quad x + 2\frac{2}{3} = -6 \\ -2\frac{2}{3} \end{array}$$

$$x = -8^{2/3}$$

Monomials: one term x or x^2y or $3xyz$

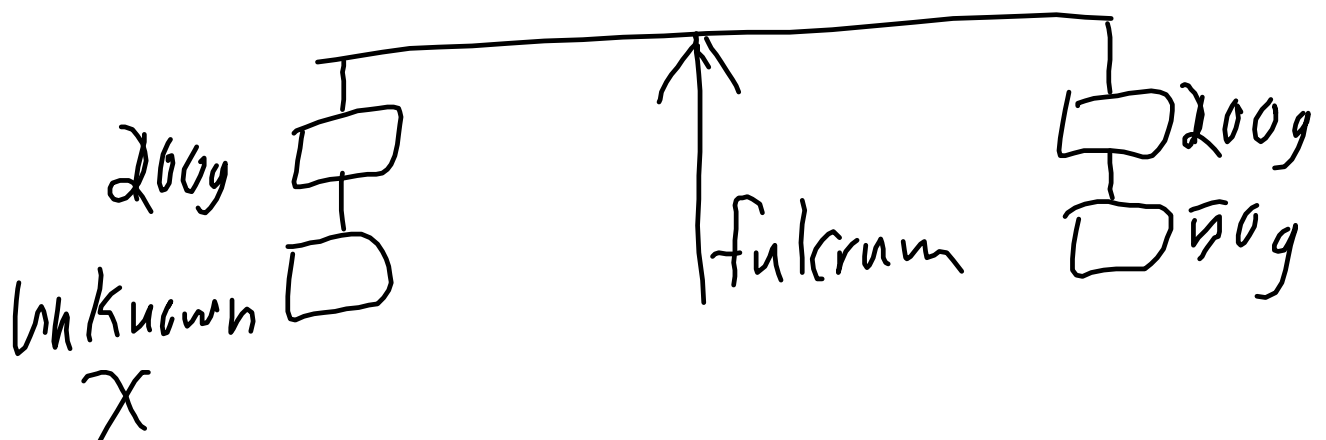
binomials: two terms $x+1$ or x^2-3x or $zy+5$

trinomial: three terms $x^2 + x + 3$

terms are separated by a $+$ or $-$

Block 1-1

Balance - Model for
An equation



$$200g + X = 250g$$

relation

$-200g$

$-200g$ ← both sides

isolation
x by itself

-200g

but
side

$$0 + x = 50g$$

$$x = 50g$$

$$200g + x = 250g$$

$$200g + 50g = 250g \quad \checkmark \text{ wait}$$

$$\text{or } x - 3 = 7$$

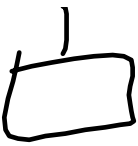
$$+3 \quad +3$$

$$\hline x + 0 = 10$$

$$x = 10$$

two equal unknowns and 100g balances 200g



100g 

$$\begin{array}{r} 2x + 100g = 200g \\ - 100g \quad - 100g \\ \hline \end{array}$$

$$\begin{array}{r} \textcircled{2}x + 0 = \underline{100g} \\ \underline{2} \qquad \underline{2} \end{array}$$

$$x = 50g$$